

# Sustaining Economies and the Earth's Resources

#### **California Education and the Environment Initiative**

Approved by the California State Board of Education, 2010

#### The Education and the Environment Curriculum is a cooperative endeavor of the following entities:

California Environmental Protection Agency
California Natural Resources Agency
Office of the Secretary of Education
California State Board of Education
California Department of Education
California Integrated Waste Management Board

#### **Key Leadership for the Education and Environment Initiative:**

Linda Adams, Secretary, California Environmental Protection Agency
Patty Zwarts, Deputy Secretary for Policy and Legislation, California Environmental Protection Agency
Andrea Lewis, Assistant Secretary for Education and Quality Programs, California Environmental Protection Agency
Mark Leary, Executive Director, California Integrated Waste Management Board
Mindy Fox, Director, Office of Education and the Environment, California Integrated Waste Management Board

#### **Key Partners:**

Special thanks to **Heal the Bay,** sponsor of the EEI law, for their partnership and participation in reviewing portions of the EEI curriculum.

Valuable assistance with maps, photos, videos and design was provided by the **National Geographic Society** under a contract with the State of California.

Office of Education and the Environment
1001 | Street • Sacramento, California 95812 • (916) 341-6769
http://www.calepa.ca.gov/Education/EEI/

© Copyright 2010 by the State of California

All rights reserved.

This publication, or parts thereof, may not be used or reproduced without permission from the

Office of Education and the Environment.

These materials may be reproduced by teachers for educational purposes.



#### **Lesson 1** Economic Forces

Supply and Demand Cards 2

#### **Lesson 2** The Global Fish Market

None required for this lesson.

#### **Lesson 3** The Effects of Market Forces on Natural Systems

None required for this lesson.

#### **Lesson 4** One Ocean, Many Mouths

None required for this lesson.

#### **Lesson 5** Regulating the Market

#### **Assessments**

| Sustaining Economies and the Earth's Resources— |   |
|---|---|
| Traditional Unit Assessment Master              | 1 |
| Economic Portfolio Guide—                       |   |
| Alternative Unit Assessment Master 1            | 5 |

| - >= ^                                    | X }               |                   |
|---|-------------------|-------------------|
| Producer<br>\$100                         | Producer<br>\$150 | Producer<br>\$250 |
| Producer \$50                             | Producer<br>\$150 | Producer<br>\$200 |
| Producer<br>\$50                          | Producer<br>\$100 | Producer<br>\$200 |
| · >   — — — — — — — — — — — — — — — — — — |                   |                   |

| - <b>&gt;</b> |          | °        |          |
|---------------|----------|----------|----------|
|               | Producer | Producer | Producer |
|               | \$300    | \$400    | \$450    |
|               | Producer | Producer | Producer |
|               | \$300    | \$350    | \$450    |
|               | Producer | Producer | Producer |
|               | \$250    | \$350    | \$400    |

| - > <b>←</b>  | % ^      | <u> </u> |
|---------------|----------|----------|
| Consumer      | Consumer | Consumer |
| \$50          | \$100    | \$200    |
| Producer      | Consumer | Consumer |
| \$500         | \$100    | \$150    |
| Producer      | Consumer | Consumer |
| \$500         | \$50     | \$150    |
| - <b>&gt;</b> |          |          |

| _ <b>&gt;</b>     |                   |                   |
|-------------------|-------------------|-------------------|
| Consumer<br>\$250 | Consumer<br>\$350 | Consumer<br>\$400 |
| Consumer \$250    | Consumer<br>\$300 | Consumer<br>\$400 |
| Consumer \$200    | Consumer<br>\$300 | Consumer<br>\$350 |

| _ >< |                   |                   |  |
|------|-------------------|-------------------|--|
|      | Consumer<br>\$500 |                   |  |
|      | Consumer<br>\$450 |                   |  |
|      | Consumer<br>\$450 | Consumer<br>\$500 |  |

## **Embargo**

A law or policy prohibiting trade with another nation, or trade of a particular good.



Suspension of an activity for a waiting period set by an authority.

## Quota

A limit set on the quantity of a good that can be harvested or extracted, or imported into a country.

**><-**

## Subsidy

Government funds given to support an enterprise that is considered beneficial to the public.

### **Tariff**

A tax on imported goods imposed by the domestic government.



An agreement on conditions of commerce in goods and services.

# **Zoning**

The designation of an area as separate, or for a particular use.



|    | Name:  |
|----|--|
|    | rt 1 structions: Select the best answer and circle the correct letter. (2 points each)   |
| 1. | When supply of a good decreases, what happens to the price of the good?  a. the price decreases  b. the price increases  c. the price stays the same  d. price equilibrium             |
| 2. | Which of the following is least likely to affect demand for a good?  a. competition  b. price  c. regulation  d. scarcity  |
| 3. | a. Price b. Scarcity c. Consumption d. Equilibrium   |
| 4. | Quantity of a good or service that producers are willing to sell to consumers at a given price is called  a. demand b. price c. scarcity d. supply                                     |
| 5. | When there is a surplus of a good, what usually happens to the price for that good?  a. the price decreases  b. the price increases  c. the price stays the same  d. price equilibrium |
| 6. | Which of the following usually has the least influence on supply and demand?  a. scarcity  b. equilibrium  c. regulation  d. price   |

|     | Name:   |
|-----|---|
| 7.  | Bycatch is an example of  a. scarcity  b. a byproduct of industry practices c. trawling d. increased demand for fish products   |
| 8.  | a. Competition b. Price c. Bycatch d. a and b   |
| 9.  | limit the amount of a good or resource that can be produced or consumed.  a. Tariffs  b. Quotas  c. Subsidies  d. Equilibriums  |
| 10  | A law that suspends an activity for a certain period of time is called a  a. subsidy b. tariff c. moratorium d. quota   |
| Ins | rt 2 structions: Read the directions and complete the chart.  List three effects on ocean ecosystems resulting from an increase in production (supply) and                          |
|     | consumption (demand) of fish products. Then, list three effects on the fishing industry that would result from the effects on the ocean ecosystem. (2 points each, 12 points total) |
| E   | Effects on the Ocean  Effects on the Fishing Industry   |

#### Sustaining Economies and the Earth's Resources

Traditional Unit Assessment Master | page 3 of 4

|               | Name:   |
|---------------|---|
| Part<br>Instr | 3 ructions: Answer each of the following questions using complete sentences or paragraphs.  |
| 12. V         | What is the relationship between natural resources and our economies? (5 points)  |
| _             |   |
| _             |   |
| _             |   |
|               | Describe how the methods and rates of extraction, harvesting, and consumption of a resource can ffect Earth's natural systems. (5 points) |
| _             |   |
| _             |   |
| _             |   |
| _             |   |
| _             |   |
|               | Describe competition: . What is competition? (2 points)   |
| b             | . How does competition for a resource affect supply and price? (4 points)   |
|               |   |
|               |   |
|               |   |
|               |   |

|     |    | Name:   |
|-----|----|---|
|     | C. | How does competition for a resource affect natural systems? (4 points)  |
|     |    |   |
|     |    |   |
|     |    |   |
|     |    |   |
| 15. |    | y do regulation measures exist in a market economy? Provide examples of two regulation asures used in the fishing industry. (10 points) |
|     |    |   |
|     | _  |   |
|     |    |   |
|     | _  |   |
|     |    |   |
|     |    |   |
|     |    |   |
|     |    |   |
|     |    |   |
|     |    |   |

| Name: |  |  |  |  |  |
|-------|--|--|--|--|--|

**Instructions:** Using what you have learned about market forces and the economy, investigate the forces at work on one other good or commodity. You may choose from the following list, or use other topics provided by your teacher:

- Agricultural products: corn, rice, soybeans, beef, poultry, dairy, timber, sod
- Energy sources (Fuel): solar energy, wind energy, wave energy, biodiesel/biofuels, oil, natural gas, coal, oil, plutonium
- Minerals: gold, silver, aluminum (bauxite), silica
- Other: water, land (real estate)

You may work in teams to conduct the research for this project. However, you are responsible for creating and submitting your own portfolio. Use the Economic Portfolio Scoring tool on the next page to guide your writing.

Your portfolio will need to include the following information:

- The **name** of the good or commodity you have chosen.
- Basic supply, demand, and price of this good or commodity. Think about the following questions:
  - Where does the supply of this good or commodity come from?
  - What type of supply is available of this good or commodity?
  - What type of demand is there for the good or commodity?
  - Have there been any recent changes in the supply, demand, or price of the good or commodity? Why or why not?
- A list of **byproducts** that result from the production (supply) and consumption (demand) of the good or commodity, and an explanation of how these byproducts affect natural systems.
- A description of how domestic and international competition influence the supply and demand of this good or commodity, and any "threats" to a continual supply of your good or commodity.
- A description of the regulation of this good or commodity, and how it influences supply and demand. Discuss any disputes over the regulation measures and explain why there have been any (or not).
- References: Include citations for all sources of information you used in preparing your portfolio.

| Your portfolio may take one of the following for | forms | ollowina | the f | e one o | / take | may | portfolio | Your |
|--|-------|----------|-------|---------|--------|-----|-----------|------|
|--|-------|----------|-------|---------|--------|-----|-----------|------|

- A PowerPoint-based presentation
- A brochure or booklet
- A typed (word processed) report

| O (1   |  |  |  |
|--------|--|--|--|
| Other: |  |  |  |
|        |  |  |  |

| Your portfolio is due on: $\_$ |  |
|--------------------------------|--|
| I                              |  |

| Name: |  |
|-------|--|
|       |  |

#### **Economic Portfolio Scoring Tool**

| Component            | 4 points  | 3 points  | 2 points  | 1 point  |
|----------------------|---|---|---|--|
| Content-<br>Overall  | Covers topic in-depth with details and examples. Subject knowledge is excellent.                | Includes essential knowledge about the topic. Subject knowledge appears to be good.                         | Includes essential information about the topic but there are 1–2 factual errors.  | Content is minimal or there are several factual errors.  |
| Content-<br>Accuracy | All content throughout the portfolio is accurate. There are no factual errors.                  | Most of the content is accurate, but there is one piece of information that might be inaccurate.            | The content is generally accurate, but one piece of information is clearly flawed or inaccurate.                                    | Content is typically confusing or contains more than one factual error.                                |
| Supply and<br>Demand | Portfolio addresses supply and demand of the good with detail and accuracy.                     | Portfolio addresses supply and demand of the good but not with full detail or accuracy.                     | Portfolio addresses supply and demand but not in detail or with several mistakes.   | Portfolio mentions supply and demand but does not explain it.  |
| Byproducts           | Portfolio addresses byproducts related to the good with detail and accuracy.                    | Portfolio addresses<br>byproducts related<br>to the good but not<br>with full detail or<br>accuracy.        | Portfolio addresses<br>byproducts related to<br>the good but not in<br>detail or with several<br>mistakes.                          | Portfolio mentions<br>byproducts but<br>does not give or<br>explain examples,<br>or their effects.     |
| Regulation           | Portfolio addresses regulations related to the good with detail and accuracy.                   | Portfolio addresses regulations related to the good but not with full detail or accuracy.                   | Portfolio addresses regulations related to the good but not in detail or with several mistakes.                                     | Portfolio mentions regulations but does not describe them or their effects.                            |
| Competition          | Portfolio addresses domestic or international competition of the good with detail and accuracy. | Portfolio addresses domestic or international competition of the good but not with full detail or accuracy. | Portfolio addresses<br>domestic or<br>international<br>competition of the<br>good but not in<br>detail or with several<br>mistakes. | Portfolio mentions domestic and/ or international competition but does not describe it or its effects. |
| Requirements         | All requirements are met or exceeded.   | All requirements are met.   | One requirement was not completely met.   | More than one requirement was not completely met.  |





California Education and the Environment Initiative

